



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/085,309	02/28/2002	Jean-Francois Kummel	145.002	7609

7590 02/15/2006

Timothy E. Newholm
BOYLE FREDRICKSON NEWHOLM STEIN & GRATZ S.C.
250 Plaza, Suite 1030
250 East Wisconsin Avenue
Milwaukee, WI 53202

EXAMINER

TUGBANG, ANTHONY D

ART UNIT	PAPER NUMBER
----------	--------------

3729

DATE MAILED: 02/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/085,309	Applicant(s) KUMMEL, JEAN-FRANCOIS	
	Examiner A. Dexter Tugbang	Art Unit 3729	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) 2,5,6 and 11-17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4 and 7-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1/9/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The applicant(s) response filed on December 6, 2005 has been fully considered and made of record.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. The rejections below are maintained and hereby repeated merely for the applicant(s) convenience.

Election/Restrictions

4. Claims 2, 5, 6 and 11-17 continue to stand as being withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on July 3, 2003.

Claim Rejections - 35 USC § 102

5. Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Billings et al.

Billings discloses a method of manufacturing an inductive component comprising: winding a wire having ends to form a winding (either one of primary windings 28 or 32) in the form of a flat coil (see col. 1, lines 62-67); connecting the ends of the winding to inner ends of connecting terminals 24; overmolding a body (assembly 14) from a block of insulating material onto the coil and onto inner ends of the connecting terminals so that a lower face of the body is

Art Unit: 3729

orthogonal to an axis of the coil with the body including a central opening or hole (see Fig. 1); and placing a ferrite core 12 on the body such that the core surrounds the body in a center plane containing the axis of the coil and has a center coil element (cylindrical projection not labeled on core section 12) passing through the central opening of the body. It is noted that Billings does not recite the use of any “former”. Thus, the winding step of Billings is considered to be “performed without using a former”.

Regarding Claim 3, the claimed “grid” is read as hub 16 and the coil is considered to be bonded, i.e. jointly attached, to the grid through slots 26.

Claim Rejections - 35 USC § 103

6. Claims 4 and 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Billings et al in view of Yanase et al.

Billings teaches the claimed manufacturing method as previously discussed and further including forming the block of material by overmolding with plastic to mechanically protect the wire leads of the winding (see col. 1, line 62 to col. 2, line 29). Billings does not teach the use of a non-magnetic adhesive or specifically injection molding process using a thermoplastic polymer.

Yanase teaches an overmolding process of injection molding a thermoplastic polymer for several advantages, such as to mechanically protect windings and provide an inductive component with high efficiency and accuracy during operation (see col. 1, lines 13-26).

Regarding Claim 4, Yanase teaches that the thermoplastic polymer acts a non-magnetic adhesive for overmolding material (see col. 3, lines 50-54).

Art Unit: 3729

Regarding Claims 8 and 9, Yanase further teaches at least one example of injection molding at 300 °C at pressure ranges between 10-150 kg/cm², which is approximately 10-150 bars (see col. 6, lines 38-48).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have formed the molded body of Billings with the overmolding process of Yanase, to mechanically protect and bond the leads of the windings to the body, as well as positively provide an inductive component with high efficiency and accuracy during operation.

Regarding Claim 10, it would have been an obvious matter of design choice to choose any desired cycle time range of injection molding, since applicant has not disclosed that the claimed time of less than 15 seconds, solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the time cycle taught by Yanase.

Response to Arguments

7. The applicant(s) arguments filed January 9, 2004 have been fully considered, but they have not been deemed to be found as persuasive.

In regards to the merits of the prior art, the applicant(s) argue that none of the references above teach any block of insulating material that is formed into a body on the coil and connecting terminals by overmoulding the insulating material onto the coils and connecting terminals (as required at lines 7-8 of Claim 1).

The examiner most respectfully disagrees at least for the following reasons.

Art Unit: 3729

The bobbin assembly 14 was not read as the “grid” in Claim 3, but was read as the claimed “body” (line 7 of Claim 1) as this body is described by Billings as being made from an insulating material of molded plastic (see col. 1, lines 65-68). Plastic is inherently known to be an electrically insulating material. This body 14 is considered to be “overmolded” because: 1) it is *molded* plastic, and 2) it is formed *over* both the flat coil (e.g. windings 28 or 32) and the connecting terminals (e.g. 24). Clearly the body 14 of Billings is formed over the flat coil and the connecting terminals as shown in Figure 1. In Claim 3, the “grid” was read as the hub 16.

Furthermore, the examiner’s position is that the order of the when the “flat coil” is formed relative to the “body” is not claimed and it appears that the applicant(s) are arguing more specifically than that which is claimed. Moreover, the terms of “onto” (recited each at lines 7 and 8) are very broad terms and further limitations are needed as to the relationship between the insulating material and either the body, or the terminals, or both, in order to avoid Billings.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

Art Unit: 3729

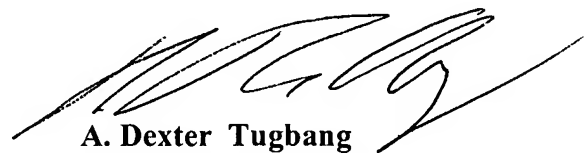
however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. This application contains Claims 2, 5, 6 and 11-17, which are drawn to an invention nonelected with traverse in the response filed on July 3, 2003. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to A. Dexter Tugbang whose telephone number is 571-272-4570. The examiner can normally be reached on Monday - Friday 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 571-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


A. Dexter Tugbang
Primary Examiner
Art Unit 3729

February 8, 2006